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Frequency Assignment — as Simple as Buying Gasoline?

By Thomas Kidd - [October-December 2017](#)

Buying a tank of gasoline is relatively simple. With just a credit card (or cash) you get precisely the product you need, in the amount you need it. You don't have to show the car registration or proof of insurance; and you don't need to provide the year, make, or model of your car. You certainly don't need to explain what you will be using your car for, once you have purchased the gasoline.

Why? Because none of these pieces of information are relevant to the fundamental transaction of buying gasoline. All you need to know is how much gas you need to fill the tank, and what type of fuel is best for your car.

Electromagnetic spectrum is a little like gasoline in that it is the resource used to make things happen or "go." For example, the electromagnetic environment doesn't care what information the spectrum is carrying. Identical signals coming from two different radios are identical regardless of the information they carry. Similarly, the gas pump doesn't differentiate between selling you fuel to drive to the store, versus fuel to drive to a rock concert.

But what if we could make the "purchase" of spectrum as simple and unencumbered as buying gas?

The frequency assignment process is how spectrum is "purchased." The amount and type of information required to assure you get (or "buy") the right spectrum may seem more complicated, but it is fairly minimal from a spectrum management perspective: waveform, power, frequency, location, and perhaps the direction the signal will travel.

But that's where the simplicity ends. Twenty-first century modern spectrum management tools have become a catch-all for spectrum-related acquisition and operational data. Collecting and providing this additional data takes time and resources. And some data, even though often just copied from one source and pasted into spectrum management tools, is administratively required but is irrelevant to spectrum operational impact on the electromagnetic environment and to the process of acquiring spectrum — so not an effective use of time. Additionally, spectrum transactions are often delayed for non-spectrum related reasons, such as disagreement over how inventories will be managed or training conducted.

The Department of the Navy Spectrum Team is committed to reducing the current administrative burden of spectrum management. To the greatest extent practicable, it is critical the broader spectrum management community work together to reduce the amount of unnecessary and irrelevant data collected during the spectrum management frequency assignment process. It may not be feasible or realistic to make the spectrum process as simple as buying gasoline, but it shouldn't be as time-consuming and burdensome as it is now.

Tom Kidd is the director for DON Strategic Spectrum Policy for the Department of the Navy Chief Information Officer.

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